



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/017,402	12/14/2001	Michael R. Brickey	83448AEK	1498

7590 10/05/2004
Paul A. Leipold
Patent Legal Staff
Eastman Kodak Company
343 State Street
Rochester, NY 14650-2201

EXAMINER

WANG, GEORGE Y

ART UNIT PAPER NUMBER

2871

DATE MAILED: 10/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/017,402

Applicant(s)

BRICKEY ET AL.

Examiner

George Y. Wang

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 23-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 April 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Election/Restrictions

1. This application contains claims directed to the following patentably distinct species of the claimed invention:

(1) the specifics of the light diffuser comprising a first embodiment corresponding to claims 1-22;

(2) the specifics of the back lighted imaging media comprising a light source comprising a second embodiment corresponding to claim 23;

(3) the specifics of the liquid crystal display (LCD) device and component comprising a light source comprising a third embodiment corresponding to claims 24-25.

2. Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claim 1 is generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include

all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

3. Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

4. During a telephone conversation with Art Kluegel on September 30, 2004 a provisional election was made without traverse to prosecute the invention of Specie 1, claims 1-22. Affirmation of this election must be made by applicant in replying to this Office action. Claims 23-25 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-7, 10-14, and 19-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Ouderkirk et al. (U.S. Patent No. 5,825,543, hereinafter "Ouderkirk"):

8. As to claim 1, Ouderkirk discloses a light diffuser (col. 15, line 40) comprising a thermoplastic layer (col. 32, lines 62-63) containing thermoplastic polymeric material and microvoids (col. 16, lines 51-55) having substantially circular cross-section (fig. 3) in a plane perpendicular to the direction of light travel having a diffuse light transmission efficiency of at least 65% (col. 32, lines 50-53).

9. As per claim 2, Ouderkirk discloses the light diffuser as recited above where the difference in refractive index between the thermoplastic polymeric material and the microvoids is greater than 0.2 (col. 2, lines 66-67; col. 3, lines 1-2).

10. Regarding claims 3-4 and 6, Ouderkirk discloses the light diffuser as recited above are formed by organic microspheres (col. 13, lines 12-14), are substantially free

Art Unit: 2871

of scattering inorganic particles (col. 13, lines 21-22), and contain a gas (col. 16, lines 58-59).

11. As to claim 7, Ouderkirk discloses the light diffuser as recited above with thickness uniformity less than 0.10 micrometers (uniform skin layer, col. 15, lines 44-46).

12. Regarding claims 10-14, Ouderkirk discloses the light diffuser as recited above where the light transmission is greater than 87% (col. 34, lines 6-8) and where the microvoids have a major axis diameter to minor axis diameter ratio of 1.0 (col. 10, lines 41-43).

13. As per claims 19-20, Ouderkirk discloses the light diffuser as recited above where the thermoplastic layer comprises polyolefin polymer (col. 14, lines 10-14) and polyester polymer (col. 13, lines 21-22).

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

15. Claims 5, 15-18 and 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ouderkirk in view of Aylward et al. (U.S. Patent No. 6,017,686, hereinafter "Aylward").

16. Regarding claims 5 and 21-22, Ouderkirk discloses the light diffuser as recited above, however, the reference fails to specifically disclose microvoids containing cross-linked polymer beads having a particle size between 0.30 and 1.7 micrometers.

Aylward discloses a light diffuser (col. 3, lines 28-30) with microvoids containing cross-linked polymer beads (col. 5, lines 5-10, 44-45) having a particle size between 0.30 and 1.7 micrometers (col. 4, lines 43-44).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have microvoids containing cross-linked polymer beads having a particle size between 0.30 and 1.7 micrometers since one would be motivated to

provide a light diffuser with a recognized spectral transmission of at least 40% (col. 9, lines 17-18).

17. As to claims 15-18, Ouderkirk discloses the light diffuser as recited above, however, the reference fails to specifically disclose microvoids having an average volume between 12 and 18 cubic micrometers over an area of 1 cm² and where the light diffuser has a thickness between 12.5 and 50 micrometers.

Aylward discloses a light diffuser (col. 3, lines 28-30) with microvoids having an average volume between 12 and 18 cubic micrometers over an area of 1 cm² (col. 4, lines 50-55) and where the light diffuser has a thickness between 12.5 and 50 micrometers (col. 4, lines 43-44).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have microvoids having an average volume between 12 and 18 cubic micrometers over an area of 1 cm² and where the light diffuser has a thickness between 12.5 and 50 micrometers since one would be motivated to provide a light diffuser with a recognized spectral transmission of at least 40% (col. 9, lines 17-18).

18. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ouderkirk in view of Wu et al. (U.S. Patent No. 5,346,954, hereinafter "Wu").

Ouderkirk discloses the light diffuser as recited above, however, the reference fails to specifically disclose the elastic modulus of the light diffuser being greater than 500 MPa.

Wu discloses a light diffuser (col. 1, line 54) with an elastic modulus that is greater than 500 MPa (col. 11, lines 65-67).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have a light diffuser with an elastic modulus that is greater than 500 MPa since one would be motivated to provide a light diffuser that does not crystallize under performance (col. 11, lines 57-59), which ultimately preserves and optimizes diffusion functionality.

19. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ouderkirk in view of Yamamoto et al. (U.S. Patent No. 5,502,011, hereinafter "Yamamoto").

Ouderkirk discloses the light diffuser as recited above, however, the reference fails to specifically disclose the impact resistance of the light diffuser being greater than 0.6 Gpa.

Yamamoto discloses a light diffuser (col. 3, lines 28-30) with an impact resistance that is greater than 0.6 Gpa (col. 4, line 66).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have a light diffuser with an impact resistance that is greater than 0.6 Gpa since one would be motivated to provide a ceramic having improved mechanical properties (col. 2, lines 64-65), which ultimately preserves and optimizes diffusion functionality.

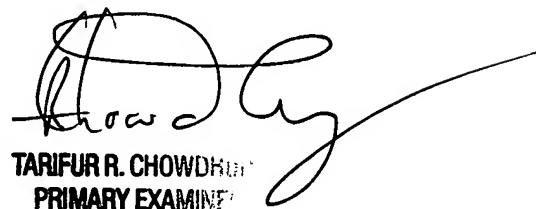
Conclusion

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Y. Wang whose telephone number is 571-272-2304. The examiner can normally be reached on M-F, 8 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on 571-272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

gw
September 30, 2004



TARIFUR R. CHOWDHURY
PRIMARY EXAMINER